Hochiminh City University of Technology
Computer Science and Engineering
[CO1027] - Fundamentals of C++ Programming

Course Introduction

Lecturer: Duc Dung Nguyen
Credits: 3

Introduction

- Audience: students who have no background in computer programming
- Aims: provide basic knowledge and skill on programming with two important programming paradigms: structure programming and object-oriented programming.
- Demonstration language: C++
- Prerequisite: basic math knowledge
- Requirement:
  - Class attendance
  - Self-study
  - Work hard

Learning outcome

- What you will get from the course
  - Be able to describe the algorithm for your problem
  - Understand and be able to use structure programming techniques
  - Be able to implement a given algorithm using C++
  - Understand basic concepts of Object-Oriented Programming (OOP)
  - Improve your coding style
  - The process of solving problem

Contents

- Basic of programming language (C++)
- Control structures
- Array and structure
- Pointer
- Recursive
- Class
  - Inherirance, template, polymophism, and advanced topics

Syllabus

- Course meeting time:
  - Lecture: 3 hours / week for 8 weeks
  - Laboratory: 2 hours / week for 9 weeks
- Course mechanics:
  - Textbook: C++ How to program
  - Reference book: *Fundamentals of C++ Programming* – Richard L. Halterman
  - Lecture notes
  - Online materials

Syllabus

- Assessment
  - Assignment
  - Lab test
  - Final exam: 90’
  - Ratio: lab (10%), test (20%), assignment (30%), final exam (40%)

  (This is a tentative ratio, it may change a bit)
- Coding environment:
  - Recommend: Visual studio
  - Other IDEs are welcome

Regulations

- Any plagiarism act will lead to zero in all tests!
- Final grade of assignment depends on the exam
  - $A_{final} = N \sum_{i=1}^{N} \frac{1}{T_i^{-1}}$
- Detail mapping of exam questions and assignments will be announced during the progress of the course.